



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/520,374	09/12/2005	Milan Jelinek	871V.0138.U1(US)	2531
29683 7590 03/20/2009 HARRINGTON & SMITH, PC 4 RESEARCH DRIVE, Suite 202 SHELTON, CT 06484-6212				
EXAMINER				
HE, JIALONG				
ART UNIT		PAPER NUMBER		
2626				
MAIL DATE		DELIVERY MODE		
03/20/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

Application No.

10/520,374

Applicant(s)

JELINEK ET AL.

Examiner

JIALONG HE

Art Unit

2626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 15 January 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 2-4, 6, 7, 14, 19, 32 and 63-113 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-4, 6, 7, 14, 19, 32 and 63-113 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 January 2005 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 07/05/2007 and 06/26/2006 are in compliance with the provisions of 37 CFR 1.97. Accordingly, the information disclosure statement is being considered by the examiner.

### ***Claim Objections***

3. Claims 2-4 and 6-7 are objected because these claims depend on succeeding claims, for example, claim 2 depends on claim 14. A series of singular dependent claims is permissible in which a dependent claim refers to a preceding claim which, in turn, refers to another preceding claim. See MPEP § 608.01(n).

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the

art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 2-4, 6-7, 14, 19, 32 and 63-113 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The amended independent claim 14 recites "receiving signal-coding parameters representative of a sound signal encoded in accordance with a first communication mode of a first communication scheme;

receiving a request to **transmit** the signal-coding parameters using a second communication mode of **the first communication scheme** to reduce bit rate during transmission of said signal-coding parameters; and

in response to the request, dropping a portion of the signal-coding parameters to enable **transmission** of the signal-coding parameters using the second communication mode of **the first communication scheme**"

There is not support for this amended claim in the original disclosure. The original disclosure discloses a method of interoperation between two communication systems CDMA2000 VBR-WB (**first communication scheme**) and AMR-WB (**second communication scheme**) using full-rate (**first communication mode**) or half-rate (**second communication mode**). From the closest disclosure of original claim 1 (now

cancelled), it appears the signal is encoded with first communication mode (full rate), in response to reducing bit rate, dropping some coding parameters (half rate) and transmitting remaining parameters using **second communication scheme**. There is no disclosure to drop coding parameters and transmitted remaining parameters using **first communication scheme** because the first communication scheme can handle full-rate and does not need to drop coding parameters.

Amended and new Independent claims 32, 75, 81, 85, 92, 98 and 110 have the similar problem as explained for claim 14.

Depend claims are rejected because they depends on their corresponding independent claims.

New Claims 98-113 claim computer readable medium. However, in the original disclosure, there is no disclosure about computer readable medium.

### ***Claim Rejections - 35 USC § 103***

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

8. Claims 2, 6-7, 14, 19, 32, 64, 66-68, 70-73, 75-81, 83-85, 87-90, 92-98, 100-101, 103-105, 108-110 and 112-113 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf et al. (WO 01/03391, published January, 2001, hereinafter referred to as Graf, applicant's IDS) in view of Jacobs et al. (US Pat. 5,414,796, hereinafter referred to as Jacobs).

Regarding claim 14, Graf discloses a method comprising:

receiving signal-coding parameters representative of a sound signal encoded in accordance with a first communication mode of a first communication scheme (**page 1 line 24 - page 2, line 23, PTSN or ISDN** (first communication scheme); 64 kbits for PCM coding);

transmit the signal-coding parameters using a second communication mode of the first communication scheme to reduce bit rate during transmission of said

signal-coding parameters (**page 1, lines 24-29, Universal**

**MobileTelecommunications Service (UMTS)** (second communication scheme), **page 2, encoded with bitrate 8 or 16 kbits** (a second communication mode)); and

dropping a portion of parameters to enable transmission of the signal-coding parameters using the second communication mode of the first communication scheme (**page 9, lines 10-15, stuff bits are removed** (dropping a portion of parameters)).

Graf discloses a method of adapting bit rates between two communication schemes (e.g., UMTS and PTSN). Graf does not disclose receiving a request and based on the request to adjust bit rates. Graf discloses adding and dropping stuff bits but does not explicitly discloses stuff bits are a portion of the signal coding parameters.

Jacobs discloses a variable bit rate vocoder. In response to a request, adjusting bit rate (**Jacobs, col. 15, lines 55-60, rate control; also fig. 4, #84**). Jacobs further discloses dropping codebook index at 1/8 rate (**Jacobs, col. 36, lines 55-60**).

Graf and Jacobs are analogous art and from a similar field of applicant's endeavor in speech coding. Therefore, it would have been obvious to a person having ordinary skill in the art at the time the invention was made to modify Graf's teaching with Jacobs's teaching to adjust bit rate based on the decided rate and rate control commands (a request) and drop codebook index to reduce bit rate. The claimed

invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding claim 2, which depends on claim 14, Graf in view of Jacobs discloses all limitations of claim 14, Graf further discloses the first communication mode of the first communication scheme is a full-rate communication mode and the second communication mode of the first communication scheme is a half-rate communication mode (**page 5, lines 30-33, first mobile and second mobile maybe the same or different such as full-rate or half-rate**).

Regarding claim 7, which depends on claim 14, Graf in view of Jacobs discloses all limitations of claim 14, Graf in view of Jacobs further discloses inserting an identification of a communication mode to be transmitted along with the remaining signal-coding parameters (**Jacobs, col. 37, lines 55-65, mode bit used to indicate mixed frame type**).

Regarding claim 64, which depends on claim 14, Graf in view of Jacobs discloses all limitations of claim 14, Graf in view of Jacobs further discloses the dropped portion of the signal-coding parameters comprises fixed codebook indices (**Jacobs, col. 36, lines 55-60, codebook index is dropped**).



Regarding claim 66, which depends on claim 14, Graf in view of Jacobs discloses all limitations of claim 14, Graf in view of Jacobs further discloses generating replacement signal-coding parameters to replace the dropped portion of the signal-coding parameters (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number**).

Regarding claim 6, which depends on claim 66, Graf in view of Jacobs discloses all limitations of claim 66, Graf in view of Jacobs the dropped portion of the signal-coding parameters comprises fixed codebook indices and wherein generating replacement signal-coding parameters comprises randomly generating replacement fixed codebook indices (**Jacobs, col. 36, lines 55-60, dropped codebook index is replaced by the random number**).

Regarding claim 67, which depends on claim 14, Graf in view of Jacobs discloses all limitations of claim 14, Graf further discloses an initial step of encoding the sound signal in accordance with the first communication mode of the first communication scheme (**Graf, page 6, lines 14-16, encoded to 64 kbits of ISDN**).

Regarding claim 68, which depends on claim 14, Graf in view of Jacobs discloses all limitations of claim 14, Graf further transmitting the remaining signal-coding parameters using the second communication mode of the first communication scheme

**(fig. 2, from base transceiver station (BTS) #32 to cell phone #35 in 8 or 16 kbits (second communication mode) using PLMN (the first communication scheme)).**

Claim 32 is a device claim and is similar to claim 14. Therefore, claim 32 is rejected.

Claim 69 is a device claim and is similar to claim 63. Therefore, claim 69 is rejected.

Claim 70 is a device claim and is similar to claim 64. Therefore, claim 70 is rejected.

Regarding claim 71, which depends on claim 32, Graf in view of Jacobs discloses all limitations of claim 32, Graf in view of Jacobs further discloses transmitting the means for receiving a request is arranged to receive a request to transmit the signal-coding parameters using a half-rate communication mode (**Graf, page 5, lines 30-33, half-rate; Jacobs, fig. 1c**).

Regarding claim 72, which depends on claim 32, Graf in view of Jacobs discloses all limitations of claim 32, Graf further discloses the device is a CDMA2000

VBR-WB coder (**Graf, page 10, lines 10-15, CDMA 2000, which uses variable bit rate wide band coding method (VBR-WB)**)

Claim 73 is a device claim and is similar to claim 7. Therefore, claim 73 is rejected.

Claim 75 claims a receiving device and is similar to claim 32. Graf in view Jacobs discloses receiving device (**Graf, fig. 2**). Therefore, claim 75 is also rejected.

Claims 76-77 are similar to claim 6, therefore, claims 76-77 are rejected.

Regarding claim 78, which depends on claim 75, Graf in view Jacobs discloses all limitations of claim 75 and further discloses means for transmitting the signal coding parameters including the replaced portion of the signal-coding parameters according to the first communication mode of the second communication scheme (**Graf, pages 8-9, 64 kbits/s (the second communication scheme), ISDN (the second communication scheme), stuffed bits (the replaced portion of the signal-coding parameters)**).

Regarding claim 79, which depends on claim 75, Graf in view Jacobs discloses all limitations of claim 75 and further discloses means for operating a decoder in a full-rate mode (**page 6, lines 30-33**).

Regarding claim 80, which depends on claim 75, Graf in view Jacobs discloses all limitations of claim 75 and further discloses means for receiving the signal-coding parameters and means for decoding the sound signal using the second signal-coding parameters (**Graf, fig. 1, compressed voice, cellphone has building decoder, Jacobs, fig. 18, decoder**).

Claim 81 is a method claim and is similar to claim 75. Therefore, claim 81 is rejected.

Regarding claim 83, which depends on claim 81, Graf in view Jacobs discloses all limitations of claim 81 and further discloses transmitting the second signal coding parameters according to the first communication mode of the second communication scheme (**Graf, pages 6-7, coding parameters with stuff bits (second signal coding parameters) transmitted using ISDN (the second communication scheme) at 64kbits/s (first communication mode)**).

Regarding claim 84, which depends on claim 81 Graf in view Jacobs discloses all limitations of claim 81 and further discloses receiving the signal-coding parameters and decoding the sound signal using the second signal-coding parameters (**fig. 1, compressed voice (signal-coding parameters) sent to cell phone which has build-in decoder**).

Claim 85 is similar to claim 32. Therefore, claim 85 is rejected.

Claim 87 is a method claim and is similar to claim 64. Therefore, claim 87 is rejected.

Claims 88-90 are similar to claims 71-73, respectively. Therefore, claims 88-90 are rejected.

Claims 92-97 are similar to claims 75-80, respectively. Therefore, 92-97 are rejected.

Claim 98 is similar to claim 14. Therefore, claim 98 is rejected.

Claim 100 is similar to claim 64. Therefore, claim 100 is rejected.

Regarding claim 101 which depends on claim 98, Graf in view Jacobs further discloses the first communication mode of the first communication scheme is a full-rate communication mode and the second communication mode of the first communication scheme is a half-rate communication mode (**Graf, page 5, lines 30-33**).

Claim 103 is similar to claim 7. Therefore, claim 103 is rejected.

Claim 104-105 are similar to claim 6. Therefore, claim 104-105 are rejected.

Claim 108 is similar to claim 67. Therefore, claim 108 is rejected.

Claim 109 is similar to claim 95. Therefore, claim 109 is rejected.

Claim 110 is similar to claim 92. Therefore, claim 110 is rejected.

Claim 112 is similar to claim 83. Therefore, claim 112 is rejected.

Claim 113 is similar to claim 84. Therefore, claim 113 is rejected.

Claim 19 combines sending end (claim 32) and receiving end (claim 75). Graf in view Jacobs discloses both sending and receiving ends (**Graf, fig 2.**). Therefore, claim 19 is rejected.

9. Claim 4, 63, 65, 69, 74, 82, 86, 91, 99, 106-107, 111 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graf in view of Jacobs and further in view of El-Maleh (US PGPub. 2002/0101844, hereinafter referred to as El-Haleh).

Regarding claim 63, which depends on claim 14, Graf in view of Jacobs discloses all limitations of claim 14, Graf discloses both communication schemes can communicate at full-rate or half-rate (**page 5, lines 30-33, first mobile and second mobile maybe the same or different such as full-rate or half-rate**). Graf does not explicitly disclose but El-Haleh discloses the first communication mode of the first communication scheme is interoperable with a first communication mode of a second communication scheme and the second communication mode of the first communication scheme is not interoperable with the first communication mode of the second communication scheme (**El-Haleh, [0008-0010], CTX (CDMA system) and**

**DTX (GSM system) is interoperable for speech segments (first mode) but inoperable for non-speech segments (1/8 rate, second mode)).**

Graf, Jacobs and El-Haleh are analogous art and from a similar field of applicant's endeavor in speech coding. It would have been obvious to one of ordinary skill in the art at the time of the invention to include compatible operation for speech segments and incompatible for non-speech segments as taught by El-Haleh in Graf in view of Jacobs's teaching since the claimed invention is merely a combination of old elements, and in the combination each element merely would have performed the same function as it did separately, and one of ordinary skill in the art would have recognized that the results of the combination were predictable.

Regarding claim 65, which depends on claim 63, Graf, Jacobs and El-Haleh disclose all limitations of claim 63, Graf, Jacobs and El-Haleh further discloses transmitting the remaining signal-coding parameters using the second communication mode of the first communication scheme; generating replacement signal-coding parameters to replace the dropped portion of the signal-coding parameters; and decoding the signal-coding parameters including the replaced portion of the signal-coding parameters according to the first communication mode of the second communication scheme (**Graf, fig. 2, transmit from ISDN #8 to GMSC, page 4, insert and then remove stuff bits; Jacobs, col. 36, lines 55-66, codebook index is dropped**).

Regarding claim 4, which depends on claim 65, Graf, Jacobs and El-Haleh disclose all limitations of claim 65, Graf operating the decoder of said other station in a full-rate mode (**Graf, Page 3, lines 30-33**).

Claims 69, 74, 82, 86, 91, 99, 111 are similar to claim 63. Therefore, these claims are rejected.

Claim 106 is similar to claim 65. Therefore, claim 106 is rejected.

Regarding claim 107, which depends on claim 106, Graf, Jacobs and El-Haleh further discloses wherein the first communication mode of the second communication scheme is a full-rate mode (**Graf, page 5, lines 30-33**).

10. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf in view of Jacobs and further in view of Official notice.

Regarding claim 3, which depends on claim 14, Graf in view of Jacobs discloses all limitations of claim 14, Graf further discloses the rate adaptation method is not only for systems such as PLMN, GSM but also suitable for third generation systems such as UMTS and CDMA2000 (**page 10**). Graf does not explicitly disclose the first communication scheme is CDMA2000 VBR-WB and the second communication scheme is AMR-WB.



The examiner is taking official notice that VBR-WB (also known as VMR-WB, a coding method in CDMA2000) and AMR-WB (a coding method in GSM) are well known coding standards. Thus, the simple substitution of one known element for another producing a predictable result renders the claim obvious.

11. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Graf in view of Jacobs and further in view of El-Maleh and further in view of Official Notice.

Claim 102 is similar to claim 3. Therefore, claim 102 is rejected.

### ***Conclusion***

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

\* Tsuchinaga, Yoshiteru et al. (US 20030065508 A1) - speech transcoding method and apparatus.

\* Sayers, Ian Leslie et al. (US 20030186694 A1) - method and apparatus for integrated wireless communications in private and public network environments.

\* Yasunaga; Kazutoshi et al. (US 6330534 B1) - excitation vector generator, speech coder and speech decoder.

\* Gao; Yang et al. (US 6604070 B1) - system of encoding and decoding speech signals.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to JIALONG HE whose telephone number is (571) 270-5359. The examiner can normally be reached on Monday-Thursday, 7:00AM-4:30PM, ALT. Fridays, EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick Edouard can be reached on (571)272-7603. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JH/

/Patrick N. Edouard/

Supervisory Patent Examiner, Art Unit 2626